WHAT IS CLAIMED IS:

1. An apparatus for measuring the volume of individual particles in a liquid, the apparatus comprising:

(a) a container for suspending particles in a liquid, said container being suitable to perform transmission measurements;

(b) a means for illuminating the suspension with a wavelength of light;

(c) a means for measuring the intensity of transmitted light that reemerges from said suspension; and

(d) a means for changing the thickness of said container by a known amount.

2. The apparatus of claim 1 further comprising a microscope.

3. The apparatus of claim 1 wherein the container is an optical cuvette.

4. The apparatus of claim 3 wherein the optical cuvette comprises an input window and an output window.

5. The apparatus of claim 3 wherein the optical cuvette comprises a microscope slide and a cover slip.

6. The apparatus of claim 2 wherein a fixed plunger is provided that comes into contact with said container when said container is moved towards the objective lens of said microscope.

7. The apparatus of claim 6 wherein the container is an optical cuvette.

8. The apparatus of claim 7 wherein the optical cuvette comprises an input window and an output window.

9. The apparatus of claim 7 wherein the optical cuvette comprises a microscope slide and a cover slip.